



# MECHANICAL DATA SHEET: VESSEL

PLANT ITEM No.

R10505701

24590-LAW-LFP-VSL-00001

Project:	<b>RPP-WTP</b>	P&ID:	<b>24590-LAW-M6-LFP-P0001; 24590-LAW-M6-LFP-P0002</b>
Project No:	<b>24590</b>	Process Data Sheet:	<del>Deleted</del> <b>3/7/05</b>
Project Site:	<b>Hanford</b>	Vessel Drawing	<b>24590-LAW-MV-LFP-P0004</b>
Description:	<b>Melter 1 Feed Prep Vessel</b>		

## Reference Data

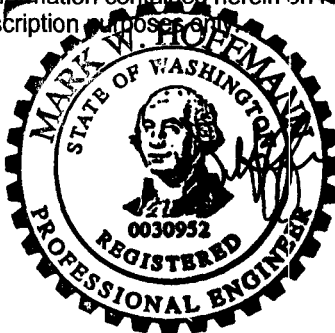
Charge Vessels (Tag Numbers)	<b>Not Applicable</b>
Pulsejet Mixers / Agitators (Tag Numbers)	<b>LFP-AGT-00001</b>
RFDs/Pumps (Tag Numbers)	<b>LFP-PMP-00001A, LFP-PMP-00001B</b>
Spray Nozzles	<b>LFP-NOZ-00001, LFP-NOZ-00002</b>

## Design Data

Quality Level	<b>CM (Note 4)</b>		Fabrication Specs	<b>24590-WTP-3PS-MV00-TP001</b>		
Seismic Category	<b>SC-III</b>		Design Code	<b>ASME VIII Div 1</b>		
Service/Contents	<b>LAW Melter Feed</b>		Code Stamp	<b>Yes</b>		
Design Specific Gravity	<b>1.90</b>		NB Registration	<b>Yes</b>		
Maximum Operating Volume	gal	<b>7,689</b>	Weights (lbs)	<b>Empty</b>	<b>Operating</b>	<b>Test</b>
Total Volume	gal	<b>9,123</b>	Estimated	<b>37,000</b>	<b>157,100</b>	<b>113,300</b>
			Actual *			

Inside Diameter	inch	<b>132</b>	Wind Design	<b>Not Required</b>		
Length/Height (TL-TL)	inch	<b>126</b>	Snow Design	<b>Not Required</b>		
		Vessel Operating	Vessel Design	Coil/Jacket Design	Seismic Design	<b>24590-WTP-3PS-MV00-TP002</b> <b>24590-WTP-3PS-FB01-T0001</b>
Internal Pressure	psig	<b>0.07</b>	<b>15</b>	<b>None</b>	Seismic Base Moment *	ft*lb
External Pressure	psig	<b>4.09</b>	<b>FV</b>	<b>None</b>	Postweld Heat Treat	<b>Not Required</b>
Temperature	°F	<b>98</b>	<b>150</b>	<b>None</b>	Corrosion Allowance	Inch <b>0.04 Top Head</b> <b>0.125 Shell &amp; Btm Head</b>
Min Design Metal Temp.	°F	<b>40</b>			Hydrostatic Test Pressure *	psig

Note: Please note that source, special nuclear and byproduct materials, as defined in the Atomic Energy Act of 1954 (AEA), are regulated at the U.S. Department of Energy (DOE) facilities exclusively by DOE acting pursuant to its AEA authority. DOE asserts, that pursuant to the AEA, it has sole and exclusive responsibility and authority to regulate source, special nuclear, and byproduct materials at DOE-owned nuclear facilities. Information contained herein on radionuclides is provided for process description purposes only.

ISSUED BY  
RPP-WTP PDC

EXPIRES 12/10/06

This bound document contains a total of 2 sheets.

1	Issued for Permitting Use	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<b>3/7/05</b>
0	Issued for Permitting Use	J. Jackson	S. Lee	C. Slater	J. Jern	12/29/03
Rev.	Reason for Revision	By	Checked	Review	Approved	Date



## MECHANICAL DATA SHEET: VESSEL

PLANT ITEM No.

24590-LAW-LFP-VSL-00001

### Materials of Construction

Component	Material	Minimum Thickness / Size	Containment
Top Head	SA-240 316 (Note 2)	See Drawing	Auxiliary
Shell	SA-240 316 (Note 2)	See Drawing	Primary
Bottom Head	SA-240 316 (Note 2)	See Drawing	Primary
Support	SA-240 304 (Note 2)	See Drawing	NIA
Jacket/Coils/Half-Pipe Jacket	NIA	NIA <sup>1</sup>	NIA
Internals	SA-240 316 (Note 2)	See Drawing	Thermowells Primary
Pipe (Seamless)	SA-312 TP316 Seamless (Note 2)	See Drawing	Note 3
Forgings/ Bar stock	SA-182 F316 (Note 2)	See Drawing	NIA
Gaskets (O Ring)	EPDM O-Ring	NIA	NIA
Bolting	SA-193 B8M / SA-194 8M	NIA	NIA

### Miscellaneous Data

Orientation	Vertical	Support Type	Skirt
Insulation Function	Not Applicable	Insulation Material	Not Applicable
Insulation Thickness (inch)	Not Applicable	Internal Finish	Welds descaled as laid
		External Finish	Welds descaled as laid

### Remarks

\* To be determined by the vendor.

Note 1: Deleted.

Note 2: Material shall have Carbon Content of 0.030% Max. Non-welded items are excluded from this requirement.

Note 3: Nozzle necks below normal operating level are Primary, others Auxiliary. See 24590-WTP-3PS-MV00-TP001 for NDE <sup>1</sup>

Note 4: Additional NDE requirements should be as per 6.4 of 24590-WTP-3PS-MV00-TP001.

Note 5: Contents of this document are dangerous waste permit affecting. <sup>1</sup>